

### Warm Up # 3-3

1. Round to 3 sig. figures.

- a) 5.2385      b) 64.705      c) 46.019      d) 105.96

2. The table shows the weight,  $w$ , of 50 third graders. Calculate an estimate of the mean weight. Show correct formula and critical totals.

| weight (lbs)      | freq. |
|-------------------|-------|
| $40 \leq w < 50$  | 4     |
| $50 \leq w < 60$  | 7     |
| $60 \leq w < 70$  | 11    |
| $70 \leq w < 80$  | 18    |
| $80 \leq w < 90$  | 9     |
| $90 \leq w < 100$ | 1     |

### HW Questions: Rev Set 6B, p. 207

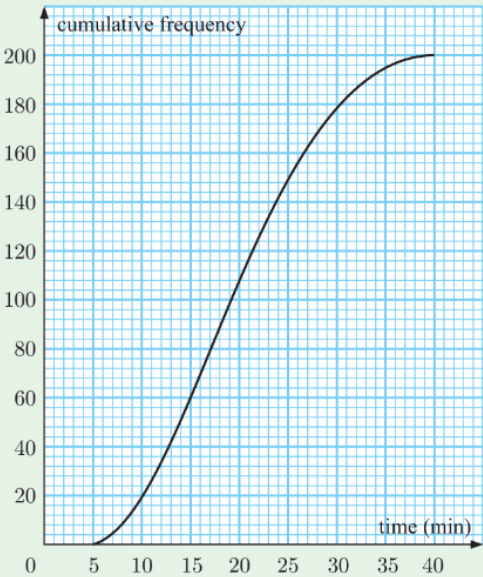
**4** The daily profits of a shop over the last 20 days, in pounds, are:

324   348   352   366   346   329   375   353   336   368  
336   375   356   358   353   311   365   376   343   331

- a** Find the:    **i** median      **ii** lower quartile      **iii** upper quartile.
- b** Find the interquartile range of the data set.
- c** Find the mean and standard deviation of the daily profits.

**5** This cumulative frequency curve shows the times taken for 200 students to travel to school by bus.

- a** Estimate how many of the students spent between 10 and 20 minutes travelling to school.
- b** 30% of the students spent more than  $m$  minutes travelling to school. Estimate the value of  $m$ .



**6** The playing time, in minutes, of CDs in a shop is shown alongside.

- a** Estimate the mean and standard deviation of the playing time.
- b** Draw a histogram to present this data.
- c** Comment on the shape of the distribution.

| Playing time (minutes) | Number of CDs |
|------------------------|---------------|
| $30 \leq t < 35$       | 5             |
| $35 \leq t < 40$       | 13            |
| $40 \leq t < 45$       | 17            |
| $45 \leq t < 50$       | 29            |
| $50 \leq t < 55$       | 27            |
| $55 \leq t < 60$       | 18            |
| $60 \leq t < 65$       | 7             |

- 7** Find the range, lower quartile, upper quartile, and standard deviation for the following data:  
120, 118, 132, 127, 135, 116, 122, 128.

- 8** A confectioner claims to sell an average of 30 liquorice allsorts per bag. The results from a survey of bags are shown in the table below.

|                           |    |    |    |    |    |    |
|---------------------------|----|----|----|----|----|----|
| <i>Number of allsorts</i> | 27 | 28 | 29 | 30 | 31 | 32 |
| <i>Frequency</i>          | 23 | 29 | 41 | 37 | 22 | 32 |

- a** Find the mean and standard deviation for this data.  
**b** Is the confectioner's claim justified?



## REVIEW SET 6C p. 208

- 1** A set of 14 data is: 6, 8, 7, 7, 5, 7, 6, 8, 6, 9, 6, 7,  $p$ ,  $q$ .  
The mean and mode of the set are both 7.  
Find  $p$  and  $q$ .

- 2** The winning margins in 100 rugby games were recorded as follows:

| Margin (points) | 1 - 10 | 11 - 20 | 21 - 30 | 31 - 40 | 41 - 50 |
|-----------------|--------|---------|---------|---------|---------|
| Frequency       | 13     | 35      | 27      | 18      | 7       |

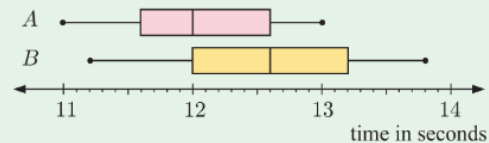
Draw a column graph to present this information.

- 3** The table alongside shows the number of patrons visiting an art gallery on various days.

Estimate the mean number of patrons per day.

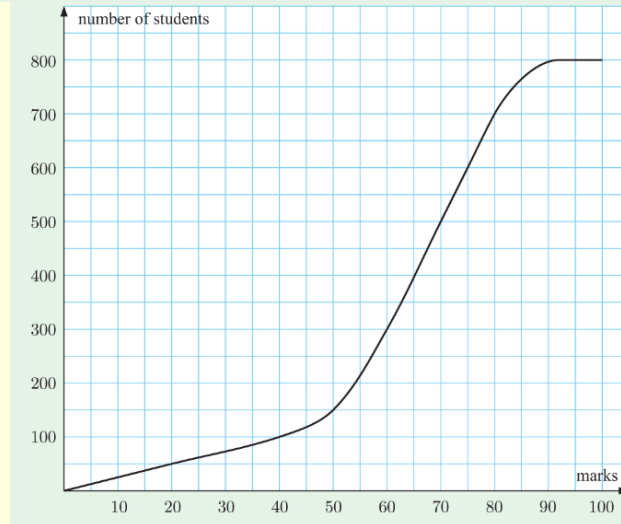
| Number of patrons | Frequency |
|-------------------|-----------|
| 250 - 299         | 14        |
| 300 - 349         | 34        |
| 350 - 399         | 68        |
| 400 - 449         | 72        |
| 450 - 499         | 54        |
| 500 - 549         | 23        |
| 550 - 599         | 7         |

- 4** The parallel boxplots show the 100 metre sprint times for the members of two athletics squads.



- Determine the 5-number summaries for both *A* and *B*.
- Determine:
  - the range
  - the interquartile range
 for each group.
- Copy and complete:
  - We know the members of squad ..... generally ran faster because .....
  - We know the times in squad ..... are more varied because .....

- 6** An examination worth 100 marks was given to 800 biology students. The cumulative frequency graph for the students' results is shown on the following page.
- a** Find the number of students who scored 45 marks or less for the test.
  - b** Find the median score.
  - c** Between what values do the middle 50% of test results lie?
  - d** Find the interquartile range of the data.
  - e** What percentage of students obtained a mark of 55 or more?
  - f** If a 'distinction' is awarded to the top 10% of students, what score is required to receive this honour?



Computer Time!

HW: Read mid page 300 -  
the bottom of page 302.

Do 10A p. 303, # 1 - 3

Unit Test: Friday